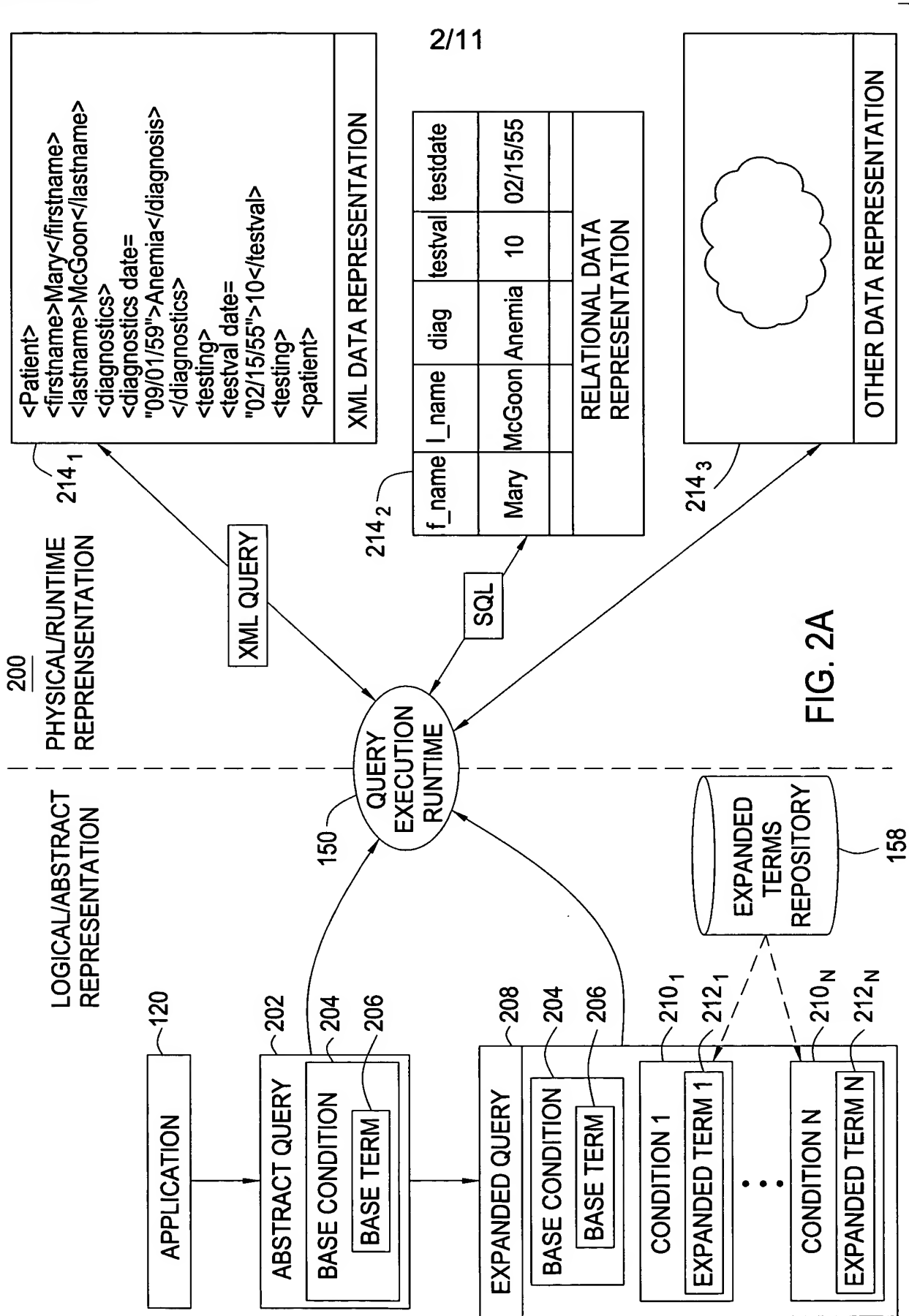


FIG. 1



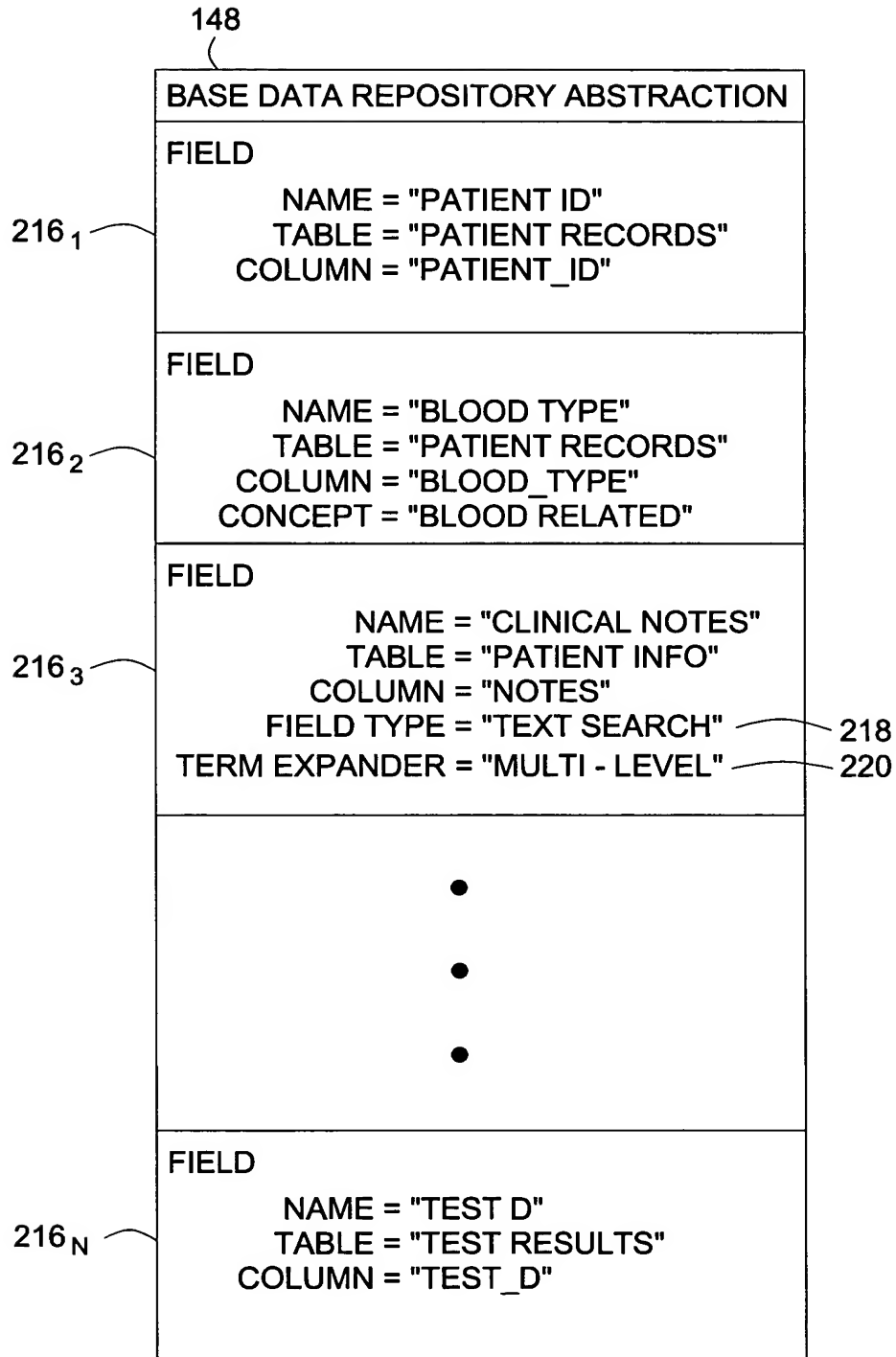


FIG. 2B

<b>EXPANDED TERMS</b> <b>BASE TERM : CANCER</b>
<b>LOW EXPANSION LEVEL :</b> <ul style="list-style-type: none"><li>● TUMOR</li><li>● CANCEROUS</li></ul>
<b>HIGH EXPANSION LEVEL :</b> <ul style="list-style-type: none"><li>● TUMOR</li><li>● MALIGNANT</li><li>● CANCEROUS</li><li>● GROWTH</li><li>● MALIGNANCY</li></ul>

**FIG. 2C**

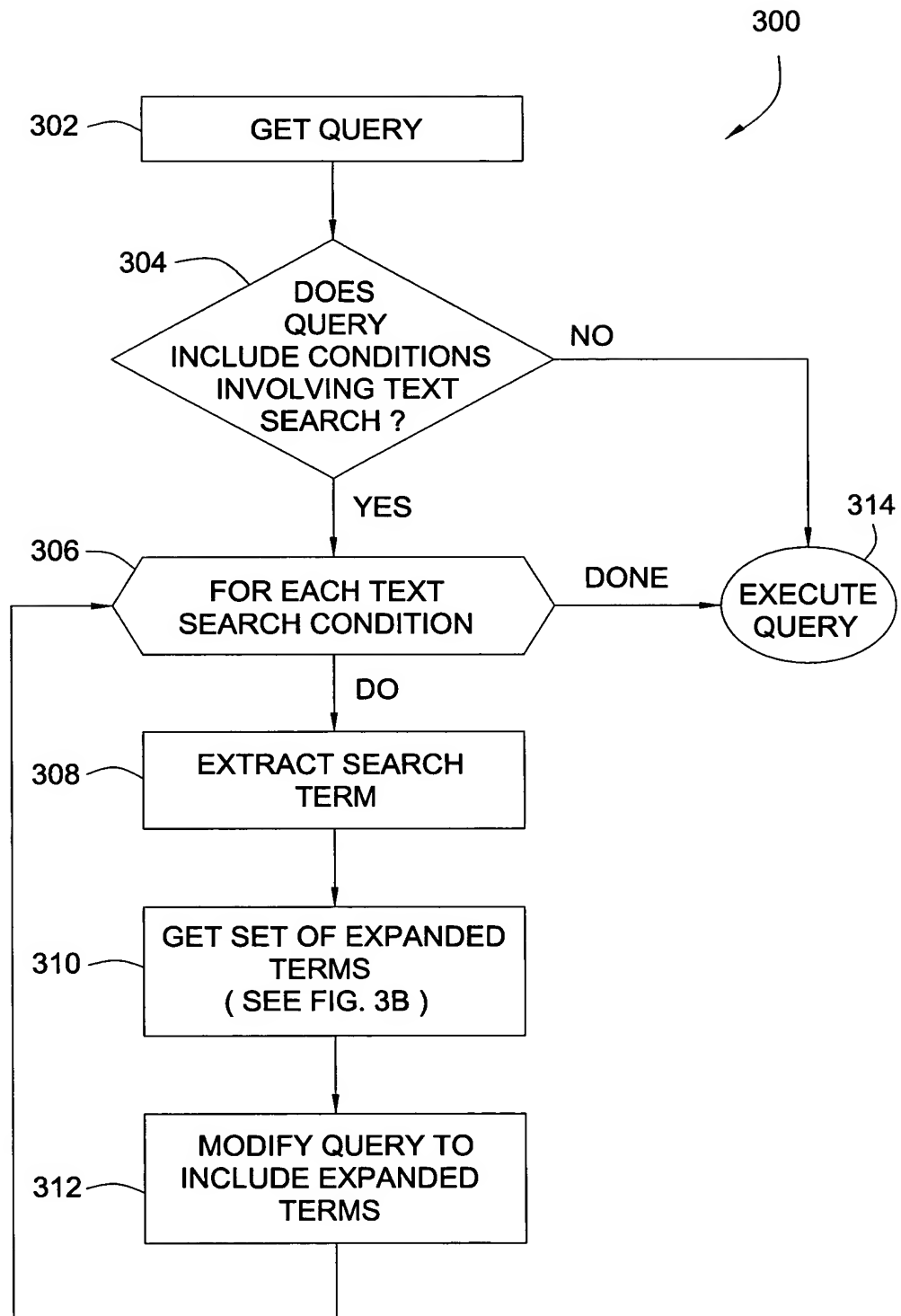


FIG. 3A

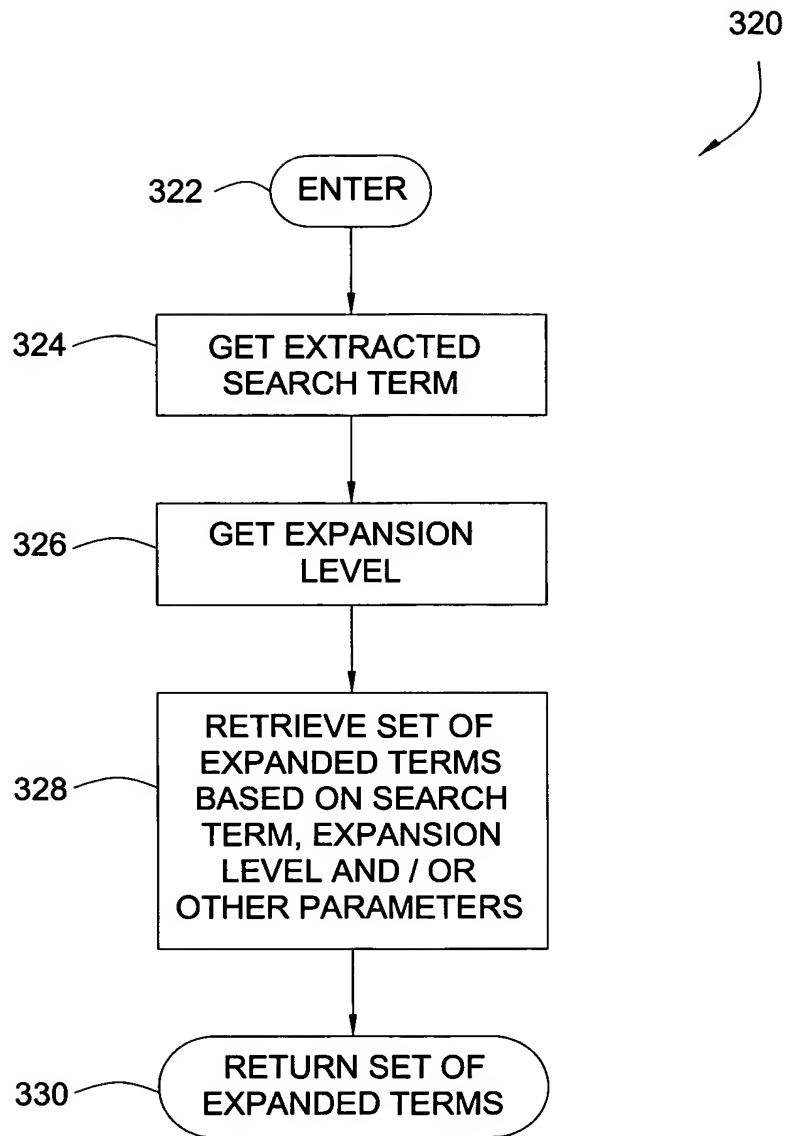


FIG. 3B

API FUNCTION	DESCRIPTION
GET EXPANSION LEVELS	GIVEN A SEARCH TERM, RETURNS THE LEVELS OF EXPANSION ALLOWED
GET EXPANDED TERMS	GIVEN A SEARCH TERM AND EXPANSION LEVEL, RETURNS A SET OF EXPANDED TERMS
BUILD EXPANDED TERMS	GIVEN A SEARCH TERM AND EXPANSION LEVEL, ADDS A LIST OF EXPANDED TERMS TO THE REPOSITORY
ADD EXPANDED TERMS	GIVEN A SEARCH TERM AND EXPANSION LEVEL, ALLOWS SPECIFIED TERMS TO BE ADDED TO AN EXISTING SET OF EXPANDED TERMS
DELETE TERM	GIVEN A SEARCH TERM AND EXPANSION LEVEL, ALLOWS SPECIFIED TERMS TO BE DELETED FROM AN EXISTING SET OF EXPANDED TERMS

FIG. 4

500

8/11

FIG. 5A

DATA DISCOVERY AND QUERY BUILDER

USER : CUJO  
QUERY : UNNAMED

CONDITIONS

OUTPUT

SUMMARY

ROOT

+ DEMOGRAPHIC

+ DIAGNOSTIC

+ CLINICAL NOTES TEXT SEARCH

- DRUG ANNOTATIONS

- DIAGNOSIS ANNOTATIONS

- SIGN ANNOTATIONS

- GENERAL TEXT SEARCH

+ TEST

CONDITION DETAILS

☒ DRUG ANNOTATIONS

☐ PARAMETER

☐ COMPARE

510

EXACTLY EQUALS

505

520

ADVANCED

CANCER

SUMMARY

SECTIONS - ALL

SECTIONS

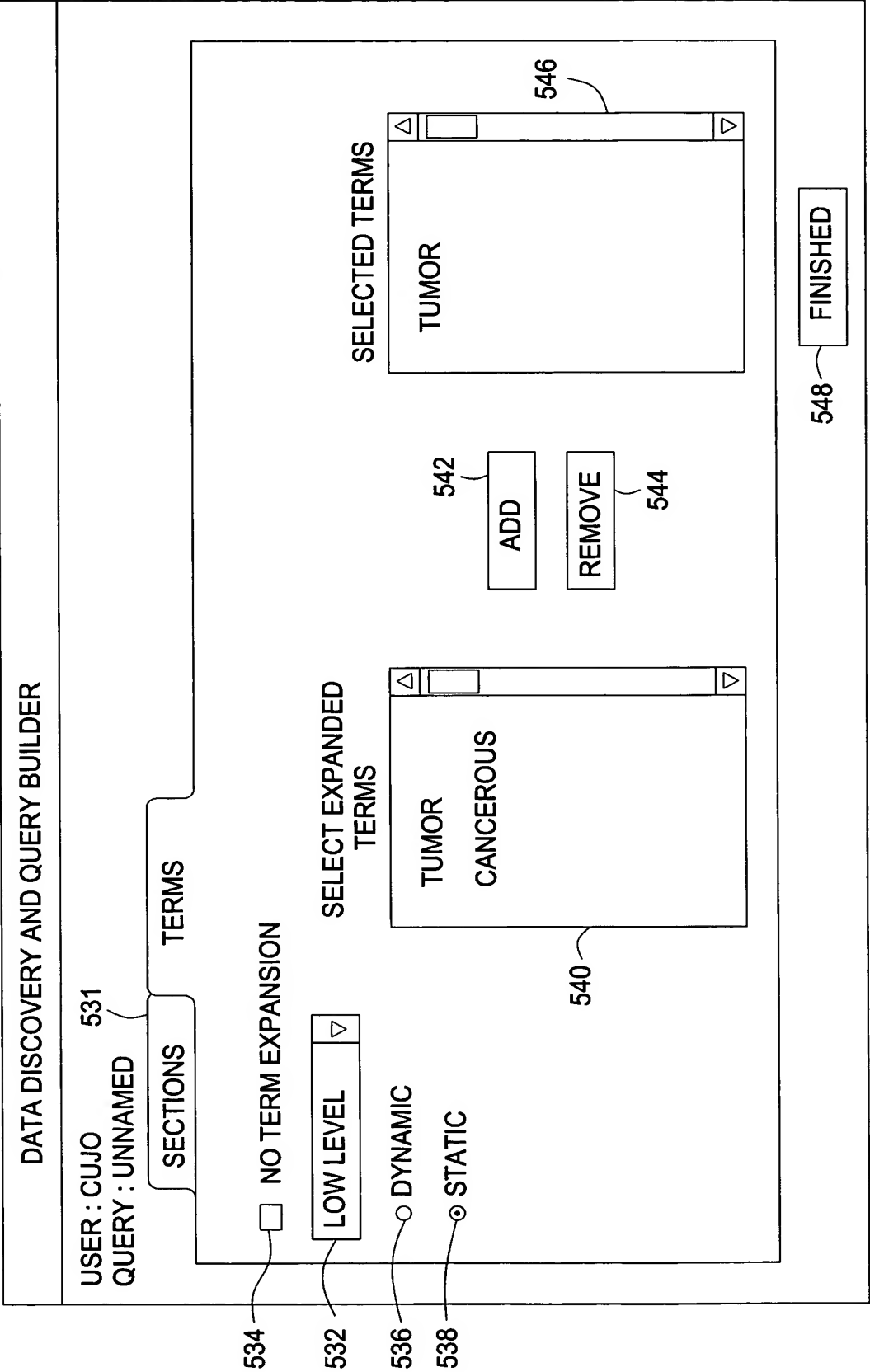
TERMS - TERM

EXPANSION



530

FIG. 5B



534

532

536

538

540

542

544

546

548

**FIG. 5C**

DATA DISCOVERY AND QUERY BUILDER

USER : CUJO  
QUERY : UNNAMED

SECTIONS      TERMS

☐ NO TERM EXPANSION

HIGH LEVEL ▾

☒ DYNAMIC  
☐ STATIC

SELECT EXPANDED TERMS

TUMOR  
MALIGNANT  
CANCEROUS  
GROWTH  
MALIGNANCY

SELECTED TERMS

TUMOR  
CANCEROUS  
MALIGNANCY

ADD      REMOVE

FINISHED

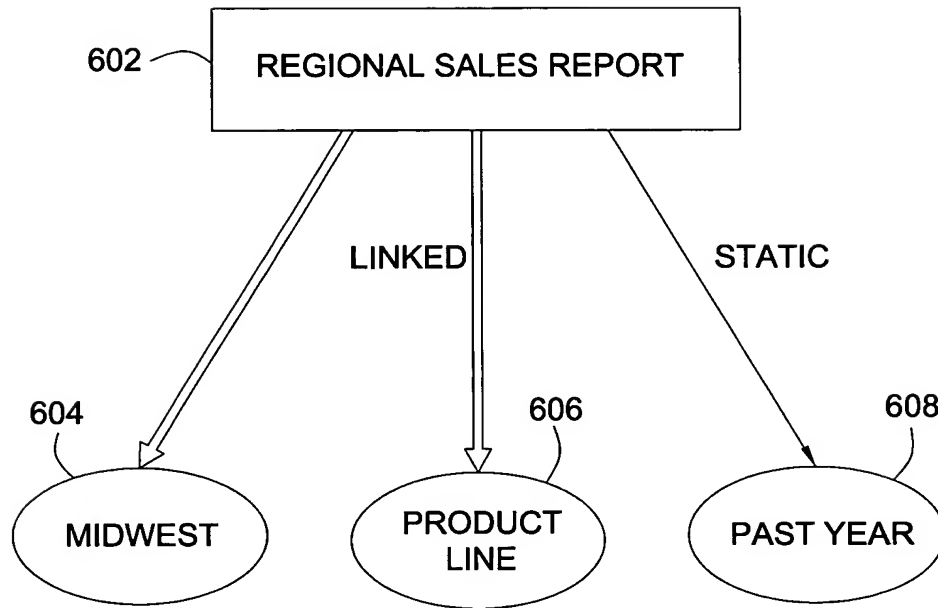


FIG. 6A

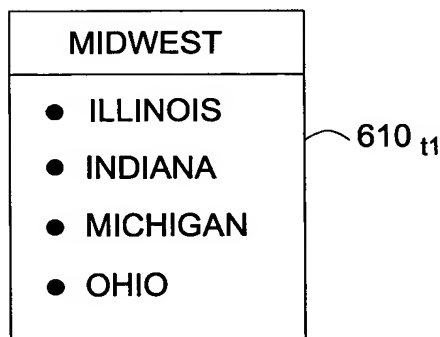


FIG. 6B

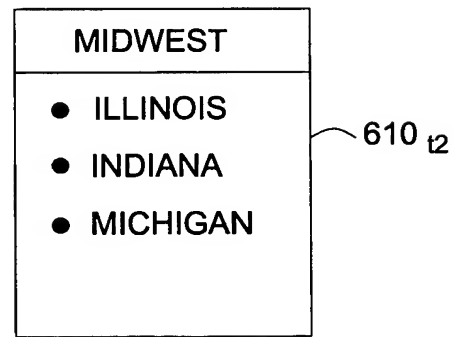


FIG. 6C